

# Disease Updates

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## Dogs

**Parvovirus** was diagnosed in 6 dogs, including 4 puppies ranging in age from 9 weeks to 7 months. One additional case of enteric necrosis contained lesions highly suggestive of parvovirus in a 9 week-old Yorkshire terrier. Four of these dogs were submitted on the same day from the same local animal shelter. All four were pit bull terriers. Two were four-month old female puppies, one a 4 year-old male, and one a 4 year-old female.

**Strychnine and Brodifacoum**, both common rat poisons, were detected in the stomach contents of an otherwise healthy male poodle. The presence of whole kernel grain was found mixed with raw ground beef in the stomach.



Trauma from a BB gunshot to the thoracic spine caused the death of a pregnant poodle.



## Cats

**Oxalate nephrosis (ethylene glycol toxicity)** was the cause of death of a 2-year old female domestic short hair in midterm pregnancy. Oxalate nephrosis usually occurs following ingestion of ethylene glycol-containing antifreeze. Cats seem to like the sweet taste of ethylene glycol, which may be found near radiator leaks.

**Feline panleukopenia (FPV)** was diagnosed in 6 cats. One additional case of enteritis was diagnosed and suspected to be panleukopenia. This kitten was also diagnosed with intestinal coccidia and cestodes.

**Feline Infectious Peritonitis (FIP)** was diagnosed in 1 thirteen-month-old cat and suspected in another kitten.

**Feline lungworms** of the genus *Aelurosstrongylus* were presumed to be the metastrongyloid nematodes found in an intact middle-aged male feral domestic short hair submitted for necropsy in poor nutritional condition. This cat also had severe ectoparasitism, feline scabies mite, *Notoedres cati*, isolated from skin-scraping. Additionally, intestinal strongyloidiasis and cestodiasis were severe enough to have contributed to the demise of this cat.



Cat lungs with subpleural and parenchymal nodular inflammation with intraleisonal nematodes.

**Bordetella bronchiseptica bronchopneumonia** was diagnosed in three cats from the same animal facility, over the course of two months. *Bordetella bronchiseptica* is most well-known as a common cause or cofactor of "kennel cough" in dogs. However, it also plays a primary role in feline respiratory disease. Indeed, transmission between the two species may occur. Epidemiological studies have shown an association between *B. bronchiseptica* isolated from cats and the presence of canine companions in the household with recent respiratory disease (Binns SH 1999. Prevalence and risk factors for feline *Bordetella bronchiseptica* infection. *Vet Rec* 144:575-80.). Similar pulse-field gel electrophoresis patterns from isolates of both species in the same living situations support this evidence. Cat-to-cat transmission also appears to play an important role in the disease cycle. Factors increasing the risk include living in rescue facilities, visiting boarding facilities, and living with large numbers (50+) of cats.



## Avian

**Respiratory aspergillosis** was diagnosed in a one-month old Western Gull. Aspergillosis is a fungal infection common to wild birds and occurs when the host is immuno-suppressed or when there are heavy environmental burdens of *Aspergillus* species present. *Aspergillus* frequently invades vessels, causing inflammation and vasculitis, with embolic showering or spread of the infection to vessels at other sites. With respiratory infections, these emboli often lodge in arteries supplying the pectoral muscles, leading to ischemic injury or infarction to the muscle, as was seen in this case.

Preeminent findings in a Green Cheek Conure were intravascular and perivascular hemorrhage with variable surrounding erythrophagocytosis, hemosiderosis, and occasional inflammation. These findings suggest that the body was mounting an immune response against antigens associated with red blood cells and possibly endothelial cells. The underlying cause of this process could be either a direct immune-mediated hemolytic anemia (an autoimmune disease similar to a self-allergy in which the body attacks its own red-blood cells) or an indirect hemolytic anemia, in which antigens associated with drugs or viral infection adhere to red blood cells and induce a similar response. In-house screening tests for influenza, Newcastle's disease (paramyxovirus), West Nile Virus, and Chlamydophila were performed and all were negative. The one other viral disease to consider would be avian polyomavirus, which occasionally manifests as a hemorrhagic disease however this would require outside laboratory testing which has not yet been requested by the owner. Were this test to be negative, the most likely conclusion would be that this was a primary hemolytic anemia. Similar cases of hemolytic anemia and hemorrhagic disease in Conures have been identified previously and have been referred to as 'Conure bleeding syndrome'. To date, little reliable

## Disease Updates

scientific information has been published regarding this 'syndrome', and therefore it is uncertain if this represents a single disease with one etiology (probably related to one of the previously discussed possibilities), or if these have been of different causes. Others have suggested nutritional causes (e.g. Vitamin K deficiency), but this has not been validated scientifically.

Trauma from presumed gunshot wounds were found in 3 male Western Gulls submitted for necropsy on the same day.

Fifty-six birds were tested for avian influenza via egg inoculation; all tested negative. These included 12 chickens, 25 pet birds, 3 ducks, and 15 wild birds.

West Nile Virus surveillance is now being done via Real-Time Polymerase Chain

### Equine

**Actinobacillosis** was diagnosed in a five-day old female miniature horse. Based upon umbilicus culture results (large growth of *Actinobacillus equuli*), this foal developed a fatal bacterial septicemia. *Actinobacillus equuli* is a specific infection of equines occurring during the neonatal period. The disease is contracted *in utero*, at parturition, or during the first days after birth. Most infected foals die within the first three days of life, some dying within 18 hours of birth. Others may live for a month or longer. Infected newborn foals are often weak, unable to nurse, and have swollen, hot, painful joints, fever or depression. The bacterium is a tiny gram-negative non-sporulating rod carried in the nasopharynx of horses. Adult horses rarely develop symptoms of disease. Typically, the kidney shows signs of injury first, but pneumonia may develop and other systems can be affected. Horsemen and practitioners sometimes call this condition "Sleepy Foal Syndrome".



### Other Animals

**Pasteurella pneumonia and sepsis** were diagnosed in two rabbits from the same facility within one week of each other. *Pasteurella multocida* is a well-known infectious agent contributing to both morbidity and mortality in rabbits. Transmission is primarily via direct contact with

nasal secretions of infected rabbits although the bacteria can survive for days outside its host in moist environments, including water dishes. Aerosolization via sneezing may increase the risk of transmission. Avoiding overcrowding of rabbits, minimizing stress, and regularly changing water can aid in control where many rabbits are housed.



definitively identified, direct contact transmission is suspected, as well as vector transmission by *Ophionyssus natricis* mites.



### Rabies Testing

One hundred-sixty-one animals were submitted for rabies testing during this period, none tested positive. High risk species included 21 bats, 4 skunks, 3 opossums, 1 coyote, and 1 fox. Medium risk species tested were 77 domestic dogs and 51 domestic cats. Three low risk animals were also tested: 1 rabbit, 1 gazelle, and 1 wild mouse. Although the last domestic dog or cat testing positive for rabies in San Diego County occurred in the late 1960s, *The Compendium of Animal Rabies Prevention and Control, 2006* considers these companion animals to be moderate risk and strongly advises vaccinations for **all** dogs, cats, and ferrets.



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